

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
South Central Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Addendum to the May 22, 2003 Statement of Basis, as amended September 21, 2004

Huber Engineered Woods, LLC
Chaney Lane – Route 3, Highway 626, Halifax County, Virginia
Permit No. SCRO-30905

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Huber Engineered Woods, LLC has applied for a Title V Operating Permit for its Crystal Hill, Virginia facility. The Department has reviewed the application and has prepared a draft/proposed Title V Operating Permit.

Engineer/Permit Contact: **DRAFT and PROPOSED** Date:
Thomas H. Berkeley, PE
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Air Permit Manager: _____ Date:
David J. Brown

Regional Director: _____ Date:
T.L. Henderson

1. FACILITY INFORMATION

Permittee

Huber Engineered Woods, LLC
P.O. Box 38
Crystal Hill, VA 24539

Facility

Huber Engineered Woods, LLC: Crystal Hill Plant
Chaney Lane - Route 3, Highway 626, Halifax County, Virginia

County-Plant Identification Number: 51-083-00050

2. SOURCE DESCRIPTION

NAICS Code: 321219 – The facility manufactures a reconstituted wood product known as oriented strandboard (OSB).

The facility is a Title V major source of Particulate Matter (PM₁₀), Nitrogen Dioxides (NO_x), Carbon Monoxide (CO), and Volatile Organic Compounds (VOC). This source is located in an attainment area for all pollutants, and is a PSD minor source. The facility was previously permitted under a Minor New Source Review (NSR) Permit issued on 11/10/04.

3. SIGNIFICANT PERMIT MODIFICATION INFORMATION

This significant permit modification to Huber's Title V (T5) permit is being generated to incorporate the changes being made in the major modification to Huber's NSR Permit. The NSR major modification addresses a "mill upgrade" that will result in an approximately 51% increase in the allowable production of OSB from $522 \times 10^6 \text{ ft}^2$ per year to $788.4 \times 10^6 \text{ ft}^2$ per year, 3/8 inch basis. Along with wide ranging changes to the production equipment, an additional "main" Regenerative Thermal Oxidizer (RTO 5) will be added to control emissions from the Energy and Dryer System (ES&D). (See Engineering review for the NSR permit action; filename: [30905.Etb_7.3_CLEAN](#) for additional details.) Huber also requested that the standalone NSR permits for the six head sander (SA2), and for the brand name logo printing system (IA) be incorporated into the major modification, so that they will have one NSR permit and one T5 permit for the Crystal Hill facility. The NSR major modification is undergoing concurrent public participation with this T5 significant modification.

Also included in this significant T5 permit modification, are revised Compliance Assurance Monitoring (CAM) requirements for Carbon Monoxide (CO) emissions from the ES&D. New Periodic Monitoring requirements for Volatile Organic Compound (VOC) emissions from each of the site's four baghouses are also added.

Finally, this T5 significant modification updates the applicable requirements to match the current T5 permit boilerplate language and condition sequence.

4. COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

5. EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

Generally, the emission units and the control devices at Crystal Hill remain as described in the Statement of Basis dated 5/22/03, as amended 9/21/04. However, the significant Title V permit modification does alter equipment at the site as follows:

- the size/rated capacity of the woodyard (WY), the Energy System and Dryers (ES&D), blending/forming (BF), the press (P), and the brand name logo system (IA) are increased
- The number of dryer regenerative thermal oxidizers (RTOs) is increased from two to four

6. EMISSIONS INVENTORY

Emissions are summarized in the following tables.

2006 Actual Emissions

| | Criteria Pollutant Emission in Tons/Year | | | | |
|-------|--|-------|-----------------|------------------|-----------------|
| | VOC | CO | SO ₂ | PM ₁₀ | NO _x |
| Total | 148.2 | 118.6 | 19.4 | 120.2 | 118.6 |

7. EMISSION UNIT APPLICABLE REQUIREMENTS

7.1 General

Since the major modification of the facility is undergoing concurrent review with the Title V permit, the date of the NSR permit is not yet known. Once final, the NSR permit issuance date will replace the placeholder language in the current DRAFT and PROPOSED Title V permit.

7.2 Woodyard (WY)

Except for coordination of NSR permit condition citations, and the addition of EPA Method 9 as the method of determination for the opacity limit, the applicable requirements for the woodyard are not being revised.

7.3 Energy System and Dryers (ES&D)

- 7.3.1 Two Regenerative Thermal Oxidizers (RTOs) are added to the ES&D air pollution control system. The four Wet Electrostatic precipitators (WESPs) and three of the four "dryer" RTOs are dispatched in accordance with the "WESP, and Dryer RTO Sequence of Operation" attachment to the NSR permit.

7.3.2 Consistent with the draft NSR permit, the meanings of several of the approved fuels are revised as follows:

- “WESP blowdown” is clarified to include both the liquid and solid fractions,
- “Wax spillage,” and “resin spillage” are altered to include “blender cleaning residue” and the name for this fuel type is changed to “waste wax and resin,” and
- “Paper products” is altered to include kraft paper.

7.3.3 The allowable throughput of oven dried flakes from the four dryers is increased from 455,520 to 578,160 tons per year.

7.3.4 Based on BACT, the opacity limit for the four RTO stacks is 10%. These stacks also serve as the exhaust points for the Wellons energy system which is subject to NSPS Dc. Based on the NSPS, the opacity limit would be 20%. Therefore, compliance with the BACT limit insures compliance with the NSPS requirement, and the NSPS limit is “streamlined out” of the Title V permit. The citation of NSPS Dc has been added to the ES&D system opacity limit condition.

7.3.5 Consistent with the draft NSR permit, and as discussed in the engineering review for the concurrent NSR major modification (INTER-AGENCY MEMORANDUM dated 6/12/07 (filename: 30905.Etb_7.3_CLEAN)) the emission limits for the ES&D are increased, except for SO₂ and VOC, and the “credible evidence” paragraph is added.

7.3.6 The requirement for the continuous emission monitors for opacity (COMs) on the RTO stacks originates in NSPS Dc and has been included in the NSR permit since issuance of the permit for the greenfield facility. The body of this condition includes the requirement to install, maintain, evaluate, calibrate, and operate the COMs in accordance with the NSPS Dc as well as other standards. The citation of NSPS Dc has been added to the recordkeeping condition for this emissions unit.

7.3.7 Compliance Assurance Monitoring (CAM) for CO from the ES&D is revised. See section 8 below for additional discussion of CAM provisions.

7.3.8 The requirement to keep daily fuel throughput records for the Wellons energy system originates in NSPS Dc and has been included in the NSR permit since issuance of the permit for the greenfield facility. The citation of NSPS Dc has been added to the condition.

7.3.9 The once-per-permit-term testing condition is edited to reflect the current equipment arrangement and limits.

7.4 Backup Thermal Oil Heater (GB)

The Backup Thermal Oil Heater (GB) is subject to NSPS Dc, and the requirement to keep fuel consumption records for the GB originates in that NSPS. The short term fuel consumption requirement is changed from a daily to a monthly basis to match the current

NSPS. The citation of NSPS Dc has been added to the recordkeeping condition.

Except for the addition of the NSPS Dc citation, coordination of regulatory citations, and some changes in NSR boilerplate language, the applicable requirements for the Backup Thermal Oil Heater are not being revised.

7.5 Blending and Forming (BF)

- 7.5.1 A throughput limit for oven dried tons of flakes for the three blenders is added.
- 7.5.2 Emission limits for VOC as propane from the BF area baghouse (DC2B) are added. Consistent with the draft NSR permit, and as discussed in the engineering review for the concurrent NSR major modification (INTER-AGENCY MEMORANDUM dated 6/12/07 (filename: 30905.Etb_7.3_CLEAN) and the "credible evidence" paragraph is added for the VOC emission limit.
- 7.5.3 Recordkeeping for the throughput limit of oven dried flakes for the three blenders is added.
- 7.5.4 A provision for once per Title V permit term testing of VOC emissions from the facility's baghouses is added to the Facility Wide conditions in order to satisfy Periodic Monitoring requirements. See section 9 below for additional discussion for this Periodic Monitoring.

7.6 Press (P)

- 7.6.1 The specifications contained in conditions VIA1 and 2 are combined into condition VIA1 in the current DRAFT and PROPOSED Title V permit.
- 7.6.2 The allowable throughput of oven dried flakes through the press is increased from 525,600 to 551,976 tons per year.
- 7.6.3 Consistent with the draft NSR permit, the emission limits for the Press are increased, except for CO, and the "credible evidence" paragraph is added.

7.7 Finish Sawing (FSS)

- 7.7.1 Emission limits for VOC as propane from the FSS baghouse (DC3C) are added.
- 7.7.2 A provision for once per Title V permit term testing of VOC emissions from the facility's baghouses is added to the Facility Wide conditions in order to satisfy Periodic Monitoring requirements. See section 9 below for additional discussion for this Periodic Monitoring.

7.8 Unresinated Dust Handling (DC4C)

- 7.8.1 Emission limits for VOC as propane from the Unresinated Dust baghouse (DC4C) are added.
- 7.8.2 A provision for once per Title V permit term testing of VOC emissions from the facility's baghouses is added to the Facility Wide conditions in order to satisfy Periodic Monitoring requirements. See section 9 below for additional discussion for this Periodic Monitoring.

7.9 Six Head Sander (SA2)

- 7.9.1 Fugitive dust controls specifically related to the six head sander are included in the NSR permit for this equipment. These applicable requirements are added.
- 7.9.2 Emission limits for VOC as propane from the six head sander baghouse (DC5) are added.
- 7.9.3 There are two periodic opacity observation requirements for the six head sander process area; one for the sander unit itself, and one of the handling operation for the material collected by the sander. The recordkeeping requirement for the opacity observation for the sander itself is edited to be consistent with the location of the observation as required in the monitoring condition (i.e., the location to be observed is the stack for the fabric filter serving the sander, and not the sander itself.)
- 7.9.4 A provision for once per Title V permit term testing of VOC emissions from the facility's baghouses is added to the Facility Wide conditions in order to satisfy Periodic Monitoring requirements. See section 9 below for additional discussion for this Periodic Monitoring.
- 7.10 Brand Name Logo (IA)
- 7.10.1 Fugitive VOC controls specifically related to the brand name logo system are included in the NSR permit for this equipment. These applicable requirements are added.
- 7.10.2 Consistent with the draft NSR permit, and as discussed in the engineering review for the concurrent NSR major modification (INTER-AGENCY MEMORANDUM dated 6/12/07 (filename: 30905.Etb_7.3_CLEAN) the emission limits for VOC from the brand name logo system have been removed.
- 7.10.3 EPA Method 9 has been added as the method of determination for the opacity limit.
- 7.10.4 As discussed in the engineering review for the concurrent NSR major modification (INTER-AGENCY MEMORANDUM dated 6/12/07 (filename: 30905.Etb_7.3_CLEAN) the VOC recordkeeping applicable requirement for the brand name logo system has been altered to require the identification of the t-butyl acetate component of total VOC emitted from this system.
- 7.11 Liquid Resin Storage Tanks (T2(a-g))
Except for increasing the number of storage tanks to seven, and coordination of NSR permit condition citations, the applicable requirements for the liquid resin storage tanks are not being revised.
- 7.12 Miscellaneous Tanks (T1a, T1b, T3 & T4)
These tanks are subject to recordkeeping provisions of NSPS Subpart Kb. The statement of these applicable requirements is made more general in nature.
- 7.13 Facility Wide Conditions
EPA Method 9 has been added as the method of determination for the opacity limit.

8. COMPLIANCE ASSURANCE MONITORING (CAM)

Generally, the requirements of 40 CFR 64, CAM, apply to each emissions unit meeting all

three of the following criteria at a major source required to obtain a Title V permit:

- The unit emits or has the potential to emit (in the absence of add-on control devices) quantities of one or more regulated air pollutants that exceed major source thresholds,
- The unit is subject to one or more emission limitations for the regulated air pollutants for which it is major before control, and
- The unit uses a control device to achieve compliance with one or more of these emission limitations.

However, 40 CFR 64.2(b) lists several specific exemptions to the CAM rule. These exemptions provide that certain emission limitations or standards are exempted, and the exemptions include the new source performance standards (NSPS) and national emission standards for hazardous air pollutants (NESHAP) proposed after November 15, 1990

As shown in Table 1 (attached), the following Pollutant-Specific Emissions Unit (PSEU) at Huber requires a CAM plan:

- CO emissions from the ES&D, controlled by the (4) dryer RTOs

(Note: As shown in Table 1, two additional CAM Plans will be required in the first renewal this Title V permit.)

The initial CAM plan for the PSEU was submitted by Huber and is attached to the draft Title V permit. The body of the Title V permit includes current applicable requirements for CAM Including Monitoring, Recordkeeping, and Reporting requirements. Note: Condition **III.B.12** includes reference to "...an excursion or exceedance (other than those caused by excused startup and shutdown conditions)." Due to less than optimum combustion conditions during startup and shutdown, it would not be unexpected for CO concentrations to exceed the indicator range during these transitory periods. These transitory periods may be considered such "excused" conditions.

9. Periodic Monitoring

In their comments on the draft NSR permit, dated 1/16/06, Huber requested that the previously unrecognized VOC emissions from the site's baghouses be added to the scope of emissions covered by the draft NSR permit. Therefore, 95.3 tons of VOC as propane were added to the revised draft NSR permit. The emission factors used to calculate this increase are based on a very limited number of data points, and if these factors increase by approximately 20%, the PTE of the facility could increase above PSD major source level (i.e., 250 tons/yr of VOC). Therefore, Periodic Monitoring of baghouse VOC emissions is added to the draft T5 permit. This monitoring is once per Title V permit term testing of one of the site's four baghouses for VOC emissions. Unless otherwise requested by the South Central Regional Office, this testing will not be repeated for a given fabric filter until all other fabric filters have been tested.

10. Supplemental Environmental Project

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Huber's Supplemental Environmental Project (SEP) has been completed. Therefore, the requirement to comply with the SEP is removed from the current draft Title V permit, and the related Consent Order is no longer attached to the permit.

11. GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

The General Conditions have been adjusted to comply with the current boilerplate.

Condition 47 of the NSR permit, Violation of Ambient Air Quality Standard, is added to the list of General Conditions.

12. STATE ONLY APPLICABLE REQUIREMENTS

None

13. FUTURE APPLICABLE REQUIREMENTS

None at this time.

14. INAPPLICABLE REQUIREMENTS

None Identified.

15. COMPLIANCE PLAN

None at this time.

16. INSIGNIFICANT EMISSION UNITS

16.1 General

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Generally, the insignificant emission units at Crystal Hill remain as described in the Statement of Basis dated 5/22/03, as amended 9/21/04. However, the following insignificant emission units, and notes have been added during this Title V permit modification:

| Emission Unit No. | Emission Unit Description | Citation ^A | Pollutant(s) Emitted (9 VAC 5-80-720 B) | Rated Capacity (9 VAC 5-80-720 C) |
|-------------------|---|-----------------------|---|-----------------------------------|
| 70 | One 16 hp Kohler Gasoline Pressure Washer Engine (See Note 5) | 9 VAC 5-80-720 B | Gasoline Combustion | 16 hp |
| 71 | One 12.5 hp | 9 VAC 5-80-720 B | Gasoline | 12.5 hp |

| Emission Unit No. | Emission Unit Description | Citation ^A | Pollutant(s) Emitted (9 VAC 5-80-720 B) | Rated Capacity (9 VAC 5-80-720 C) |
|--------------------------|--|------------------------------|--|--|
| | Kohler Gasoline Air Compressor (See Note 6) | | Combustion | |
| 72 | One 11 hp Gasoline Wenling Jennfeng trailer mounted generator (See Note 1) | 9 VAC 5-80-720 B | Gasoline Combustion | 11 hp |
| 73 thru 76 | Four 9 hp Gasoline E-Z GO Texton (See Note 7) | 9 VAC 5-80-720 A | Gasoline Combustion | 9 hp |
| 77 | One 6.5 hp Gasoline Briggs & Stratton Pressure Washer Engine (See Note 8) | 9 VAC 5-80-720 C | Gasoline Combustion | 6.5 hp |
| 78&79 | Two 5.5 hp Gasoline Briggs & Stratton Water Pumps (See Note 9) | 9 VAC 5-80-720 C | Gasoline Combustion | 5.5 hp |
| 80 | One 5.5 hp Gasoline Honda Pressure Washer (See Note 9) | 9 VAC 5-80-720 C | Gasoline Combustion | 5.5 hp |

Note 1 - Each 11 hp gasoline engine (Ref. No. 64 & 72) shall not operate more than 2,000 hours per year, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-80-100)

Note 5 - The 16 hp gasoline engine (Ref. No. 70) shall not operate more than 1,400 hours per year, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-80-100)

Note 6 - The 12.5 hp gasoline engine (Ref. No. 71) shall not operate more than 1,800

hours per year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-100)

Note 7 - Each 9 hp gasoline engine (Ref. No. 73 thru 76) shall not operate more than 2,500 hours per year, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-80-100)

Note 8 - The 6.5 hp gasoline engine (Ref. No. 77) shall not operate more than 3,400 hours per year, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-80-100)

Note 9 - Each 5.5 hp gasoline engine (Ref. No. 78 thru 80) shall not operate more than 4,100 hours per year, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-80-100)

- ^A The citation criteria for insignificant activities are as follows:
- 9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
 - 9 VAC 5-80-720 B - Insignificant due to emission levels
 - 9 VAC 5-80-720 C - Insignificant due to size or production rate

16.2 Equipment Subject to a MACT but with no specific requirements

16.2.1 40 CFR 63, Subpart DDDDD, Boiler MACT

Emission unit no. 2 in the insignificant emission unit table is a natural gas boiler with a capacity less than 10 MMBTU/hr (Capacity = 1.26 MMBTU/hr). As such, in accordance with the "Applicability Flow Chart" for Subpart DDDDD as shown on EPA's Technology Transfer Network website as of 4/23/07, emission unit no.2 is a unit in "Population 1," and therefore has no unit specific applicable requirements. (Note: Per FR Vol. 69, No. 176, 9/13/04, Page 55255, initial notification for existing small gaseous fuel boilers is not required.)

16.2.2 40 CFR 63, Subpart ZZZZ, RICE MACT

The current version of the Stationary Reciprocating Internal Combustion Engines (RICE) MACT is dated 6/15/04. Changes to the 2004 version have been proposed but have not yet been made final. As stated in the preamble to the 2004 version "...all stationary RICE with a site-rating of more than 500 brake HP located at major sources are subject to the (2004) final rule..." However, the preamble goes on to say "...other types of existing stationary RICE (ie., ...compression ignition (CI)...) located at a major source of HAP emissions are not subject to any specific requirement under the final rule." The insignificant activities equipment includes a 749 HP Diesel Generator Engine (Ref. No. 66). This engine was installed circa 1994 as part of the construction of the greenfield facility and so fits the definition of an existing stationary RICE (ie., commenced construction before 12/19/02). Also, since it is a diesel fueled unit, this engine is compression ignition type. Therefore, there are no specific requirements in the RICE MACT for engine No. 66. Huber notified DEQ in their submittal received 5/14/02, as part of their response to inquiry regarding possible Section 112 (j) that they had equipment subject to the RICE MACT. This submittal is considered to satisfy the initial notification requirements for the MACT.

17. CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application

are suitable for public review.

18. PUBLIC PARTICIPATION

The draft/proposed permit will be placed on public notice in the South Boston Gazette-Virginian on 6/27/07. The public comment period will end on 8/16/07.

Attachments

1. Table 1: PSEU review for CAM Applicability
2. Insignificant Engines (calculations)